

WHAT IS CLAIMED IS:

1. A droplet ejecting apparatus, comprising:
a channel unit having at least one pressure chamber which communicates, at a first end thereof, with a liquid supply manifold so as to be supplied with a liquid by the liquid supply manifold and, at a second end thereof, with a nozzle so as to eject a droplet of the liquid through the nozzle; and

an actuator unit fixed to the channel unit, the actuator unit having a plurality of active portions which are opposed to said at least one pressure chamber of the channel unit and each of which includes at least one first electrode and at least one second electrode, and a piezoelectric sheet interposed between the first and second electrodes, the plurality of active portions being deformed to change a volume of said at least one pressure chamber.

2. The apparatus according to claim 1, wherein the respective piezoelectric sheets of the plurality of active portions comprise respective portions of a common piezoelectric sheet, and are polarized in a direction of thickness of the common piezoelectric sheet, and wherein when an electric field is applied to the piezoelectric sheet of each of the plurality of active portions in a same direction as the direction of polarization thereof, said each active portion is elongated in the direction of thickness of the common piezoelectric sheet.

3. The apparatus according to claim 2, wherein the plurality of active portions comprise two active portions, and wherein a distance between the two active portions is selected at a value which assures that, when the two active portions are elongated in the direction of thickness of the common piezoelectric sheet, a portion of the common piezoelectric sheet that is located between the two active portions is elongated in a same direction as the direction of elongation of the two active portions.

4. The apparatus according to claim 3, wherein said portion of the common piezoelectric sheet that is located between the two active portions is elongated in the same direction as the direction of elongation of the two active portions, by not less than 90 % of an amount of elongation of each of the two active portions.

5. The apparatus according to claim 1, wherein an outer end portion of an outermost one of the plurality of active portions opposed to the pressure chamber is located at a position corresponding to a vicinity of an end portion of the pressure chamber.

6. The apparatus according to claim 5, wherein the pressure chamber comprises an elongate pressure chamber, and the plurality of active portions comprise two active portions that are distant from each other by a predetermined distance in a

lengthwise direction of the elongate pressure chamber, and wherein an outer end portion of at least one of the two active portions is located at a position inwardly distant from at least one of lengthwise opposite ends of the elongate pressure chamber by not more than 50 % of said predetermined distance.

7. The apparatus according to claim 1, wherein a ratio of a sum of respective areas of the plurality of active portions to an area equal to a product of a length of the pressure chamber and a width of each of the active portions as measured in a direction perpendicular to a lengthwise direction of the pressure chamber is not smaller than 0.7 and smaller than 1.

8. The apparatus according to claim 1, wherein the pressure chamber comprises an elongate pressure chamber, and the plurality of active portions comprise two elongate active portions which are distant from each other in a lengthwise direction of the elongate pressure chamber and each of which extends parallel to the elongate pressure chamber, and wherein the elongate pressure chamber has a first width, and each of the elongate active portions has a second width smaller than the first width.

9. The apparatus according to claim 8, wherein a ratio of a sum of respective areas of the elongate active portions to an area equal to a product of the second width of said each elongate active portion and a length of the elongate pressure

chamber is not smaller than 0.7 and smaller than 1.

10. The apparatus according to claim 8, wherein a ratio of a sum of respective lengths of the elongate active portions to a length of the elongate pressure chamber is not smaller than 0.7 and smaller than 1.

11. The apparatus according to claim 1, wherein the channel unit has a plurality of pressure chambers which communicate, at respective first ends thereof, with a common liquid supply manifold so as to be supplied with a liquid by the common liquid supply manifold and, at respective second ends thereof, with respective nozzles so as to eject respective droplets of the liquid through the respective nozzles.

12. The apparatus according to claim 11, wherein the common liquid supply manifold comprises an ink supply manifold which supplies an ink as the liquid, and wherein the actuator unit changes a volume of each of the pressure chambers of the channel unit, so as to eject, from a corresponding one of the nozzles, a droplet of ink as the droplet of liquid and thereby form an image on a recording medium.

13. A droplet ejecting apparatus, comprising:
a channel unit having at least one elongate pressure chamber which communicates, at a first end thereof, with a liquid supply manifold so as to be supplied with a liquid by the

liquid supply manifold and, at a second end thereof, with an nozzle so as to eject a droplet of the liquid through the nozzle; and

an actuator unit fixed to the channel unit, the actuator unit having a plurality of elongate active portions which are opposed to said at least one elongate pressure chamber of the channel unit and each of which includes at least one first electrode and at least one second electrode, and a piezoelectric sheet interposed between the first and second electrodes, the plurality of elongate active portions being deformed to change a volume of said at least one elongate pressure chamber,

wherein a ratio of a sum of respective lengths of the elongate active portions to a length of the elongate pressure chamber is not smaller than 0.7 and smaller than 1.